

1 Q. **Install Plant Heating System – Holyrood Thermal Generating Station, Tab 4,**
2 **Volume II, Page 4**

3 *“Hydro performed a cost/benefit analysis to compare the alternatives. Table 1*
4 *provides the capital and annual operating and maintenance (O&M) costs for each*
5 *alternative.”*

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7 Did Hydro consider an all-electric heat alternative for the plant heating system? If
8 not, why not?
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11 A. Hydro did consider an all-electric heat alternative for the plant heating system. In
12 the review of alternatives for plant heating, Hydro found all-electric heating is not a
13 common practice in a large industrial setting because it is more economical to use a
14 fuel fired heating source.

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16 The existing Holyrood plant electrical infrastructure was not designed to support
17 the large electrical loads required to electrically heat the plant space. Therefore,
18 significant re-work and upgrades, including upgrades to switchgear and the plant
19 electrical distribution system, would be required. Hydro also considered the risk of
20 various pieces of equipment freezing in the event of a system power outage, which
21 would shut down the electrically sourced plant heat. Mitigation of this risk would
22 require a backup power supply of approximately 6 MW and the anticipated capital
23 expenditure for this alone was estimated to be higher than the capital cost of the
24 selected alternative. For these reasons, an all-electric heating alternative did not
25 prove practical.